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PROCESS OF MAKING A DEHYDRATED FLOUR MIXTURE

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This invention relates to a dehydrated flour for use in making pastry products and to a process of making the same.

In the ordinary preparation of pastry products there are a large and varied number of ingredients which must be used which means keeping a complete stock of materials on hand. This is not only expensive and inconvenient, but necessitates careful measurements and mixing and, therefore, the provision of suitable apparatus therefor. In addition to the above, unsatisfactory results or failures occur too frequently which represent a serious loss of time, of money, of materials and of energy.

One of the objects of the present invention is to achieve the making of pastry products in an extremely simple and economical manner without the possibility of unsatisfactory results or failures.

Another object is to provide an article of commerce containing all the designated ingredients in a dry form and from which consequently the pastry product can be made merely by moistening and cooking.

A further object is to provide a dehydrated flour mixture which requires the addition of nothing but water and heat to convert it into a pastry product, thereby eliminating the maintenance of a stock of materials and apparatus together with the elimination of uncertainty of result.

Other and further objects will be understood by those skilled in this art or will be pointed out hereinafter.

We, therefore, form our mixture from the ingredients required for the manufacture of a dehydrated flour which contains those elements which will, in a particular instance, make the desired product when water in any form, or milk, and the like is added thereto and the whole baked or otherwise suitably cooked.

As a particular example, we have invented a dehydrated flour for making ginger bread and we will use this purely as an illustration of our product and process. In a typical instance, we make use of the following ingredients.

	Pounds	Percent
Wheat flour	100	43.0
Molasses	100	43.0
Sugar	11	4.8
Shortening	11	4.8
Salt	½	0.2
Baking soda	3	1.3
Powdered whole egg	6	2.6
Powdered ginger	½	0.2
Powdered cinnamon	¼	0.1

The amounts of these ingredients are not to be considered as restricted solely to the above percentages as any or all of them can be varied within rather wide limits so that the formula must be considered as giving merely the idea involved rather than any limitation as to the exact ingredients or their amounts.

The above ingredients are preferably mixed in a manner which we shall describe and wherein the molasses, shortening, sugar and salt are put in the bowl of a dough mixing machine wherein they are constantly agitated while heat is simultaneously applied thereto, the application of the heat being made in any convenient way such as by the insertion of a steam coil into the bowl of the mixing machine. The temperature of the mixture is allowed to rise until the shortening is thoroughly melted. It is to be understood that agitation has been taking place all during this time and that the sugar and salt have dissolved into the molasses. The melted fat and the solution of sugar and salt in molasses form an emulsion which is made very uniform by the agitation and consequently a very homogeneous mixture of the materials so far added is obtained.

When such a condition has been reached the heating is then discontinued and the flour added to the above named homogeneous mixture while the kneading appliance is in operation. The flour can be added gradually and is preferably so added and when completely added a dough is formed which contains the first five ingredients of the above formula.

The next step is to dry the dough. This may be done in a variety of ways. We may roll the dough into a thin sheet which is dried by subjecting it to the influence of a blast of warm air, or we may divide the dough mechanically into small lumps which may be placed on trays or dried in a suitable heated drying cabinet. We may also force the dough through steel dies to form thin strands or ribbons, like spaghetti, and these strands or ribbons may be dried in a suitable apparatus.

However the dough is dried, it is next ground to a powder and this may be done in a variety of types of grinding mill, the important requisite being that it be reduced to a suitable state of fineness and we have found that a state of division such that it will pass through a twenty-mesh sieve is satisfactory.

This powder having been formed, the manufacture of the flour mixture is practically complete as all that is then required is to simply mix in the remaining ingredients thoroughly which are